ABSTRACT

A variable flow-rate ejector for precisely controlling the flow rate based on pressure is disclosed. The ejector has a simple mechanical structure which comprises a nozzle for ejecting a first fluid; a diffuser into which a second fluid is drawn due to a negative pressure produced around the first fluid, where the first and second fluids are merged; a third-fluid chamber formed by first and second diaphragms attached to the needle, and the body of the ejector; and a fourth-fluid chamber formed by the second diaphragm and the body. The area of an opening around the needle in the opening at the head of the nozzle is changed by displacement of the needle along the central axis according to movement of first and second diaphragms which move in accordance with the pressure produced by the first fluid, the third fluid, and the fourth fluid.